Abstract

GENERALIZED EVENT REPRESENTATION IN PRE-SCHOOL CHILDREN
WITH MILD- TO HIGH-FUNCTIONING AUTISM SPECTRUM DISORDER (ASD)
AND CHILDREN WITH COGNITIVE AND LINGUISTIC DELAYS (CLD)

by

Tashana S. Samuel

Advisor: Dr. Laraine McDonough

Children with autism spectrum disorder (ASD) frequently establish rigid routines, and have difficulties flexibly applying what they have learned. An experiment was conducted to examine generalized event representation in 34 pre-school children. In Experiment 1, children diagnosed with varying kinds of cognitive and language delays (CLD: n = 14) were tested with the generalized imitation paradigm, a reliable measure of representational capacity. Two sets of perceptually dissimilar objects with similar functions were used to perform the same task: one set consisted of modeling props, and the other set was the generalization props. At the generalization assessment, children observed actions modeled by the experimenter, after which they were given different set of objects (varying in size, shape, color and texture, but have the same function as the modeled props) they could use to generalize the events. At the imitation assessment, children again observed actions modeled by the experimenter, but were given the same set of objects that the experimenter had used. The order in which the individual actions were modeled was either causal (the actions must be produced in a particular order to
achieve a goal), arbitrary (the actions can be produced in any order with the same resulting outcome), or conventional (e.g., bedtime stories are typically read after the child is in bed). This procedure was administered for eight tasks (4 novel events, 4 familiar events). The dependent measures under investigation were the mean proportion of actions, and the mean proportion of correctly ordered sequences in which the actions were produced. Experiment 2 was conducted on adults to empirically confirm that the objects used for modeling and generalization were indeed perceptually dissimilar, but similar in function. Experiment 3 was a replication of Experiment 1, and was conducted on children diagnosed with autism spectrum disorder (ASD: n = 10), and typically developing controls (TD: n = 10). Comparative data revealed that all groups were able to generalize and imitate actions and sequences compared to their baseline assessments. Although all three groups generalized fewer causal actions than arbitrary and conventional ones, the ASD children performed as well as TD children. However, it was the CLD children that showed more differences, generalizing substantially fewer causal actions than the other groups. Furthermore, productive language obtained from verbal IQ data was also related to generalization ability: CLD children with higher verbal IQ generalized better on these tasks than those with lower IQ. There were no diagnostic differences found for sequences, indicating that although participants found generalizing some actions to be problematic, their sequential understanding of events remained intact. The null result of the ASD group compared to the TD group in this sample provides evidence that children with ASD do demonstrate some cognitive strengths. Although in real world contexts, insistence on sameness can hinder learning and generalized event
representation in children with ASD, the results of current research reflects the heterogeneity of this cognitive function.